

## CLAIMS:

1. A process for the preparation of an anionic clay and boehmite-containing composition wherein a precursor mixture comprising a divalent metal source and a trivalent metal source is subjected to at least two aging steps and wherein at least once between two aging steps an aluminum source is added.
2. The process according of claim 1 wherein the first aging step is conducted at a higher temperature than a following aging step.
3. The process of claim 2 wherein the first aging step is conducted under hydrothermal conditions and a following aging step under non-hydrothermal conditions.
4. The process of claim 1 wherein the first aging step is conducted at lower temperature than a following aging step.
5. The process of claim 4 wherein the first aging step is conducted under non-hydrothermal conditions and a following aging step under hydrothermal conditions.
6. The process of claim 1 wherein at least two of the aging steps are conducted at a different pH.
7. The process of claim 1 wherein the aluminum source added between two aging steps is aluminum trihydrate or a thermally treated form thereof.
8. The process of claim 1 wherein at least once between two aging steps a drying step is conducted.
9. The process of claim 1 conducted in a continuous mode.

10. The process of claim 1 wherein the divalent metal source is an oxide, hydroxide, carbonate of hydroxy carbonate of magnesium, copper, or zinc.

5 11. The process of claim 1 wherein the trivalent metal source is an oxide or hydroxide of Al, Ga, Fe, La, or Ce.

12. The process of claim 1 wherein additives are present during at least one of the aging steps.

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13. The process of claim 1 wherein the anionic clay and boehmite-containing composition is subjected to an ion-exchange treatment.

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14. An anionic clay and boehmite-containing composition obtained by the process of claim 1.

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15. A process for the preparation of a solid solution and/or spinel-containing composition, wherein the anionic clay and boehmite-containing composition of claim 14 is subjected to a heat-treatment at a temperature between 300 and 1200 °C.

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16. A process for the preparation of an anionic clay-containing composition, wherein the anionic clay and boehmite-containing composition of claim 14 is subjected to a heat-treatment at a temperature between 300 and 1200 °C to form a solid solution-containing composition, and the latter composition is rehydrated to form an anionic clay-containing composition.

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17. A catalyst composition comprising the anionic clay and boehmite-containing composition of claim 14.

18. A process for the preparation of a catalyst composition comprising the steps of

- 5           a.     preparing a composition comprising the composition of claim 14,
- b.     adding the composition of step a to a slurry containing other catalyst components or precursors thereof, and
- c.     shaping the resulting composition.

10   19. The process of claim 18 wherein the composition prepared in step a. is treated with an acid or base before adding it to the slurry in step b.

20. The process of claim 18 wherein the composition prepared in step a is treated thermally or hydrothermally before adding to the slurry in step b.

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21. The process of claim 18 wherein the composition prepared in step a. is added to the slurry in step b. in suspended form.

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22. The process of claim 18 wherein the composition prepared in step a. is added to the slurry in step b. in a dry form.